

STATE OF MAINE DEPARTMENT OF TRANSPORTATION 16 STATE HOUSE STATION AUGUSTA, MAINE 04333-0016

DAVID A. COLE

September 13, 2006 Subject: South Portland Project No. STP-8822(00)X Pin No. 8822.00 Amendment No. 2

Dear Sir/Ms:

Please make the following changes to the Bid Documents:

Delete in its entirety the "Schedule of Items" dated 060817 twelve pages total and replace with the attached updated "Schedule of Items" dated 060912 fourteen pages total.

In the plan sheets on page four of ninety-four titled: "Estimate Quantities & Summary of Earthwork" under Estimated Quantities using the attached "Items to add or increase" one page total, update the Items, Quantities and Units where applicable. Make needed changes in pen and ink.

In the plan sheets on page seven of ninety-four titled: "General Notes" add the following notes:

- 64. Removal of existing drainage pipes, as shown on the plans or as directed, shall include all associated work, including, but not limited to, removal, backfilling, compacting, asc-gravel (match existing depth), and pavement (match existing depth). Payment for this work will be considered incidental to the drainage items.
- 65. A 1:40 ramp will be constructed with HMA or cold patch, not grindings, at all butt joints. Materials, placement, maintenance, and removal shall be incidental to contract items.
- 66. The removal and temporary resetting of mailboxes and existing signs shall be incidental to contract items. Signs and mailboxes shall be reset daily as directed by the resident.



- 67. Offsets to the catch basins and manholes are to the center of the frame.
- 68. Type A1-C and B1-C basins shall be shape 1 with haunched cone as per standard details. Flat top shall be concentric with sump.
- 69. All work and incidentals necessary to remove and dispose of guardrail shall be incidental to related items.
- 70. All joints in the curb shall be sealed from behind by a method approved by the resident.
- 71. Plastic end caps shall be used on all 150mm, Type B Under Drain.
- 72. The Contractor shall provide mark up grades for grinding and shimming at 10m intervals.
- 73. All hydrants to be relocated as shown on the plans, shall be relocated by the Contractor. Hydrants shall be placed behind the sidewalk regardless of how shown on the plans.
- 74. Removal of existing traffic signals, including foundations, shall be incidental to Item 643.71.

Make these changes in pen and ink.

In the plan sheets on page seven of ninety-four titled: "General Notes" make changes to the following notes:

Note #7 delete in its entirety the second sentence which begins: "The actual lines for clearing..."

Note #8 delete in its entirety the second sentence which begins: "The actual lines for payment ..."

Note #24 in the first sentence, delete the statement: "Removal of existing drainage pipes,"

Note #30 delete in its entirety the first sentence which begins: "All excavation below subgrade for pipes..."

Note #53 delete in its entirety the last sentence which begins: "Payment is to be made under..."

Make these changes in pen and ink.

In the plan sheets on page ten of ninety-four titled: "Striping and Signing Plans" under General Notes make the following change:

In Note #3, within the second sentence, delete the word "Determined" and replace it with "Verified". Make this change in pen and ink.

In the plan sheets on page eighteen of ninety-four titled: "Traffic Signal Plan" under General Notes make the following change:

In Note #14 change the first sentence to read: "The existing cabinet, equipment and controller cabinet foundation shall be relocated as shown." Make this change in pen and ink.

In the plan sheets on page forty-one of ninety-four titled: "Construction Staging Overview" under Notes, make changes to the following notes:

Delete in its entirety Note #8 and replace with the following statement: "Payment for temporary pavement, removal of temporary pavement and additional common excavation associated with Temporary Traffic Detours & Ramps shall be incidental to Pay Item 652.361.

Within Note #12 delete Item 652.36 and replace it with Item 652.361.

Make these changes in pen and ink.

In the book under the "Special Provision, Section 107, Prosecution and Progress, (Contract Time)" page, in Note 4) which begins: "The contractor shall cease all operations..." add the following dates:

May 23, 2008 by end of day, and shall not commence work again until May 27, 2008 (Memorial Day).

In the book under "Special Provision, Section 604, Precast Concrete Tank" two pages total, delete the page 2 of 2 drawing dated August 14, 2006 and replace with the attached updated page 2 of 2 drawing dated September 13, 2006.

In the book, remove "Special Provision, Section 604, Altering Manhole" dated August 14, 2006 one page total and replace with the attached updated "Special Provision, Section 604, Altering Manhole" dated September 13, 2006 one page total.

Insert into the book, just before "Special Provision, Section 643, Traffic Signals" the attached "Supplemental Traffic Signal Notes" five pages total.

The following questions have been received regarding "Item 801.16, 150mm PVC Sanitary Sewer".

Question: What is the class of pipe?

Response: PVC pipe shall be DR-14, AWWA C-900.

Question: What is required for connections at each end?

Response: At the terminus end we should use a 6" DI down-turned 22 1/2 degree fitting or maybe a 45. We'll field determine which angle.? As for where we tie on at the pump station that will be a rap-around "Dresser" style pressure fitting.

Question: What is the required depth of cover?

Response: 1.8 m of cover is required

Question: Is the existing main to remain, or is it to be removed as an incidental similar to the gas main?

Response: The existing main is to be abandoned and filled with lightweight grout.

Question: What type of fitting and joint restraint is required at bends?

Response: All bends and fittings are specified to be ductile iron mechanical joints with "Grip Ring" pipe restrainer (or approved equal). Additionally thrust blocks are required as detailed in the sewer replacement plans. Note that we will rap the DI fittings in poly and duct tape. The reason we are going with plastic pipe is because of the corrosive soils.

Consider these changes and information prior to submitting your bid on September 20, 2006.

Sincerely, A, HBWW

Scott Bickford

Contracts & Specifications Engineer

SCHEDULE OF ITEMS

REVISED:

LINE	ITEM	APPROX.	UNIT PRICE	BID AMOUNT
ио 	DESCRIPTION	QUANTITY AND UNITS	DOLLARS CTS	DOLLARS CT
	SECTIO	ON 0001 HIGHWAY	ITEMS	
0010	201.23 REMOVING SINGLE TREE TOP ONLY	 4.00 EA	0	
0020	201.24 REMOVING STUMP 	 5.00 EA	0	
	202.15 REMOVING MANHOLE OR CATCH BASIN 	 8.00 EA	0	
	202.202 REMOVING PAVEMENT SURFACE 	 6650.00 M2	0	
	202.203 PAVEMENT BUTT JOINTS 	 730.00 M2	0	
0060	203.2001 COMMON EXCAVATION - PLAN QUANTITY	 12200.00 M3	0	
	203.2312 HEALTH AND SAFETY PLAN 	 LUMP 	 LUMP 	
	203.2333 DISPOSAL OF SPECIAL EXCAVATION 	 50.00 MG	0	
0090	203.25 GRANULAR BORROW 	 215.00 M3	0	

PAGE:

DATE: 060912

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 008822.00 PROJECT(S): STP-8822(00)X

CONTRACTOR :_ APPROX.
QUANTITY LINE | UNIT PRICE | BID AMOUNT NO DESCRIPTION |-----| DOLLARS | CTS | DOLLARS | CTS AND UNITS 206.061 STRUCTURAL EARTH 0100 EXCAVATION - DRAINAGE 125.000 AND MINOR STRUCTURES, M3 BELOW GRADE 304.104 AGGREGATE 0110|SUBBASE COURSE - GRAVEL | 11800.000| (PLAN QUANTITY) M3 403.207 HOT MIX ASPHALT 0120 19.0 MM NOMINAL MAX SIZE | 6200.000 | MG 403.208 HOT MIX ASPHALT 3650.000 0130 12.5 MM, SURFACE MG 403.209 HOT MIX ASPHALT 0140 9.5 MM (SIDEWALKS, | 1150.000 | DRIVES, INCIDENTALS) | MG 403.211 HOT MIX ASPHALT 560.000 0150 (SHIM) 409.15 BITUMINOUS TACK 5900.000 0160 COAT APPLIED |L 602.303 FLOWABLE 0170 CONCRETE FILL LUMP LUMP 603.155 300 MM RCP CLASS 0180|III 34.000 603.159 300 MM CULVERT 232.000 0190 PIPE OPTION III M 603.169 375 MM CULVERT 0200 PIPE OPTION III 5.000

SCHEDULE OF ITEMS

PAGE: 3 DATE: 060912 REVISED:

	ITEM	APPROX.	UNIT PRICE	BID AMOUNT
NO	DESCRIPTION	QUANTITY AND UNITS	DOLLARS CT	s DOLLARS CT
0210	603.175 450 MM RCP CLASS	 35.00	 0	
	603.179 450 MM CULVERT PIPE OPTION III	 205.000 M	 	
0230	603.195 600 MM RCP CLASS	 74.00	 	
0240	603.205 750 MM REINFORCED CONCRETE PIPE CLASS III	 7.000 M	 	
	603.209 750 MM CULVERT PIPE OPTION III	 22.000 M	 	
0260	603.215 900 MM REINFORCED CONCRETE PIPE CLASS III	 80.00	0	
0270	603.235 1200 MM REINFORCED CONCRETE PIPE CLASS III	 96.00 M	0	
	603.275 1800 MM RCP CLASS III	 82.00	 	
	603.76 300 MM INLET GRATE UNIT	 2.000 EA	0	
	604.072 CATCH BASIN TYPE A1-C	 36.00 EA		
	604.076 1500 MM CATCH BASIN TYPE A1-C	 3.000 EA		

PAGE: 4 DATE: 060912

SCHEDULE OF ITEMS

REVISED:

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY	UNIT P	RICE	BID AM	TUUON
NO	DESCRIPTION	AND UNITS	DOLLARS	CTS	DOLLARS	CT
	604.092 CATCH BASIN TYPE B1-C 	 4.000 EA	 			
	604.096 1500 MM CATCH BASIN TYPE B1-C 	 2.000 EA	 0 			
0340	604.15 MANHOLE 	 14.000 EA	 			
0350	604.153 1500 MM MANHOLE 	 3.000 EA	 			
	604.1552 PRECAST CONCRETE TANK 	 1.000 EA	 			
0370	604.156 2400 MM MANHOLE 	 2.000 EA	 0 			
	604.16 ALTERING CATCH BASIN TO MANHOLES 	 3.000 EA	 0 			
	604.17 ALTERING MANHOLES TO CATCH BASINS 	 1.000 EA	 			
0400	604.171 ALTER MANHOLE 	 1.000 EA	 			
	604.18 ADJUSTING MANHOLE OR CATCH BASIN TO GRADE 	 8.00 EA	 0 			
	604.182 CLEAN EXISTING CATCH BASIN AND MANHOLE 	 2.000 EA	 	 	 	

PAGE: 5 DATE: 060912

SCHEDULE OF ITEMS

REVISED:

	ITEM DESCRIPTION	APPROX. QUANTITY	 _	UNIT PE	RIC	E	BID AM	10UNT
NO	DESCRIPTION		DC	OLLARS	(CTS	DOLLARS	CT
	604.2403 CATCH BASIN INLET ASSEMBLY 	 8.000 EA	 0 				 	
0440	604.248 CATCH BASIN TYPE F6 	 1.000 EA	 0 				 	
	604.252 CATCH BASIN TYPE A5-C 	 3.000 EA	 0 				 	
	605.09 150 MM UNDERDRAIN TYPE B 	 290.000 M	0 				 	
	605.11 300 MM UNDERDRAIN TYPE C 	 720.000 M	 0 				 	
	605.13 450 MM UNDERDRAIN TYPE C 	 210.000 M	 0 				 	
	605.15 600 MM UNDERDRAIN TYPE C 	 110.000 M	 0 				 	
	605.17 750 MM UNDERDRAIN TYPE C 	 57.000 M	0 				 	
	608.253 MASONRY PAVER WITH TRUNCATED DOME 	 59.000 M2	0 				 	
	609.11 VERTICAL CURB TYPE 1 	 2100.000 M	 0 				 	
	609.12 VERTICAL CURB TYPE 1 - CIRCULAR 	 240.000 M	 		 	_ 	 	

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SCHEDULE OF ITEMS

REVISED:

LINE	ITEM	APPROX.	UNIT PRICE	BID AMOUNT
NO	DESCRIPTION	QUANTITY AND UNITS	DOLLARS CI	rs DOLLARS CT
	609.234 TERMINAL CURB TYPE 1 - 1.2 METER 	 90.000 EA		
	609.237 TERMINAL CURB TYPE 1 - 2.1 METER 	 8.000 EA		
	609.2371 TERMINAL CURB TYPE 1- 2.1M - CIRCULAR 	 55.000 EA		
0570	609.31 CURB TYPE 3 	 150.000 M		
0580	609.34 CURB TYPE 5 	 320.000 M		
	609.35 CURB TYPE 5 - CIRCULAR	 29.000 M		
0600	609.40 RESET CURB TYPE 5 	 14.000 M	 	
	609.441 CURBING REMOVED AND STACKED 	 400.000 M	 	
0620	610.08 PLAIN RIPRAP 	 300.000 M3		
0630	615.07 LOAM 	 630.000 M3		
0640	618.1301 SEEDING METHOD NUMBER 1 - PLAN QUANTITY 	 43.000 UN		

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SCHEDULE OF ITEMS

REVISED:

LINE	ITEM	APPROX.	UNIT PRICE	BID AMOUNT
NO	DESCRIPTION	QUANTITY AND UNITS	DOLLARS C	rs dollars ct
	618.1401 SEEDING METHOD NUMBER 2 - PLAN QUANTITY 	 40.000 UN		
	619.1201 MULCH - PLAN QUANTITY 	 190.000 UN		
	620.58 EROSION CONTROL GEOTEXTILE 	 830.000 M2	 	
	623.09 REMOVE AND RESET MONUMENT 	 6.000 EA		
	626.11 PRECAST CONCRETE JUNCTION BOX:	 7.000 EA	0	
	626.22 NON-METALLIC CONDUIT 	 190.000 M	 	
0710	626.31 450 MM FOUNDATION 	 4.000 EA		
	626.34 SIGNAL POLE FOUNDATION 	 16.000 EA		
	627.18 300 MM SOLID WHITE PAVEMENT MARK LINE 	 660.000 M		
0740	627.711 WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE (PLAN QUANTITY)	 1550.000 M		
0750	627.75 WHITE OR YELLOW PAVEMENT AND CURB	 150.000 M2	 	

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SCHEDULE OF ITEMS

REVISED:

LINE	ITEM	APPROX.	UNIT PRICE	BID AMOUNT
ио	DESCRIPTION	QUANTITY AND UNITS	DOLLARS CTS	DOLLARS CT
0760	627.76 TEMPORARY PAVEMENT MARKING LINE, WHITE OR YELLOW	 LUMP 	 LUMP 	
	627.77 REMOVING PAVEMENT MARKINGS 	 450.00 M2	 	
	629.05 HAND LABOR, STRAIGHT TIME 	 100.000 HR	0 	
	631.10 AIR COMPRESSOR (INCLUDING OPERATOR) 	 20.000 HR	0	
	631.11 AIR TOOL (INCLUDING OPERATOR) 	 20.000 HR	0	
	631.12 ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	 50.000 HR	0	
	631.14 GRADER (INCLUDING OPERATOR) 	 25.00 HR	0	
	631.15 ROLLER, EARTH AND BASE COURSE (INCLUDING OPERATOR)	 25.00 HR	0	
	631.172 TRUCK - LARGE (INCLUDING OPERATOR) 	 50.000 HR	0	
	631.20 STUMP CHIPPER (INCLUDING OPERATOR) 	 24.000 HR		
0860	631.21 ROAD BROOM (INCLUDING OPERATORS AND HAULER)	 25.00	 	

SCHEDULE OF ITEMS

REVISED:

LINE		APPROX. QUANTITY -	UNIT PRICE	BID AMOUNT
NO	BESCRIFTION	AND UNITS	DOLLARS CTS	S DOLLARS CTS
	631.22 FRONT END LOADER (INCLUDING OPERATOR) 	 24.000 HR	 	
	631.32 CULVERT CLEANER (INCLUDING OPERATOR) 	 24.000 HR	 	
0890	639.18 FIELD OFFICE TYPE A 	 1.000 EA		
0900	643.71 TRAFFIC SIGNAL MODIFICATION AT WESTERN AVE W/ GORHAM RD.	 LUMP 	 LUMP	
	643.71 TRAFFIC SIGNAL MODIFICATION AT WESTERN AVE. W/ FODEN RD.	 LUMP 	 LUMP	
	643.86 TRAFFIC SIGNAL LOOP DETECTORS 	 10.000 EA		
0930	643.91 MAST ARM POLE 	 4.000 EA		
0940	643.92 PEDESTAL POLE 	 3.000 EA		
0950	643.93 STRAIN POLE 	 12.000 EA		
0960	645.106 DEMOUNT REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN	 42.000 EA 	 	
0970	645.108 DEMOUNT POLE 	 30.000 EA		

SCHEDULE OF ITEMS

REVISED:

LINE	ITEM	APPROX.	UNIT PRICE	BID AMOUNT
ио	DESCRIPTION	QUANTITY AND UNITS	DOLLARS CTS	DOLLARS CT
	645.116 REINSTALL REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN	 37.000 EA 		
0990	645.1201 SIGNAL TRUSS 	 LUMP 	 LUMP 	
1000	645.280 WOOD POST 	 1.000 EA		
	645.292 REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGNS TYPE II	 44.000 M2 		
1020	645.300 U-CHANNEL POST 	 24.000 EA		
1030	652.31 TYPE I BARRICADE 	 50.000 EA		
1040	652.33 DRUM 	 200.000 EA		
1050	652.34 CONE 	 100.000 EA		
	652.35 CONSTRUCTION SIGNS 	 80.000 M2		
	652.361 MAINTENANCE OF TRAFFIC CONTROL DEVICES 	 LUMP 	LUMP	
1080	652.38 FLAGGER 	 3500.000 HR		

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SCHEDULE OF ITEMS

REVISED:

LINE	ITEM DESCRIPTION	APPROX. QUANTITY -	UNIT PRICE	E BID AMOUNT
NO	DESCRIPTION	AND UNITS	DOLLARS C	TS DOLLARS CT
	652.381 UNIFORM TRAFFIC OFFICERS 	 450.000 HR		
	652.41 PORTABLE - CHANGEABLE MESSAGE SIGN 	 4.000 EA		
1110	656.75 TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	 LUMP 	 LUMP 	
1120	657.24 SEEDING PITS 	 79.000 UN		
	658.20 ACRYLIC LATEX COLOR FINISH, GREEN 	 400.000 M2		
1140	659.10 MOBILIZATION 	 LUMP 	LUMP	
	660.21 ON-THE-JOB TRAINING (BID) 	 2000.000 HR		
	801.16 150 MM PVC SANITARY SEWER 	 365.000 M		
1170	803.01 TEST PITS 	 12.000 EA		
	812.162 ADJUST SEWER MANHOLE TO GRADE 	 30.000 EA	 	
	822.3412 200 MM PVC WATER MAIN 	 7.000 M		

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SCHEDULE OF ITEMS

REVISED:

	ITEM	APPROX.	UNIT PRI	CE		IOUNT
NO	DESCRIPTION	QUANTITY AND UNITS	DOLLARS	CTS	DOLLARS	CT
	822.351 250 MM PVC WATER MAIN 	 7.000 M	 0 		 	
	822.3621 INSULATED FORCE MAIN IN CASING 	 LUMP 	 LUMP 		 	
	822.3651 300 MM PVC WATER MAIN	 1100.000 M	 	 		
1230	823.31 300 MM GATE VALVE 	 5.000 EA	 0 	 		
	823.310 300 MM INSERTABLE GATE VALVE 	 2.000 EA	 0 		 	
	823.3211 250 MM INSERTABLE GATE VALVE 	 1.000 EA	 0 		 	
	823.3212 250 MM MJ GATE VALVE 	 1.000 EA	 0 		 	
	823.325 200 MM GATE VALVE (MJ) 	 1.000 EA	 0 		 	
	823.3254 200 MM INSERTION VALVE 	 1.000 EA	 		 	
	823.331 150 MM GATE VALVE 	 1.000 EA	 0 		 	
	823.341 AIR RELEASE VALVE 	 2.000 EA	 0 		 	

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SCHEDULE OF ITEMS

REVISED:

LINE	ITEM DESCRIPTION	APPROX. QUANTITY	UNIT PRIC	,'
	DESCRIPTION	AND UNITS		CTS DOLLARS CT
1310	824.30 FIRE HYDRANTS 	 5.000 EA		
	825.51 250 MM WATER SERVICE - RECONNECT 	 2.000 EA		
	825.52 200 MM WATER SERVICE - RECONNECT 	 1.000 EA		
	825.53 150 MM WATER SERVICE - RECONNECT 	 10.000 EA		
	825.54 100 MM WATER SERVICE - RECONNECT 	 1.000 EA		
	825.55 50 MM WATER SERVICE - RECONNECT 	 3.000 EA		
	825.56 40 MM WATER SERVICE - RECONNECT 	 3.000 EA		
	825.57 25 MM WATER SERVICE - RECONNECT 	 3.000 EA		
1390	827.10 BELOW GRADE BACKFILL - PIPE 	 500.000 M3		
1400	827.302 UNSUITABLE MATERIAL EXCAVATION BELOW TRENCH GRADE - GRAVEL BEDDING MATERIAL	 115.000 M3		

MAINE DEPARTMENT OF TRANSPORTATION PAGE: 14 DATE: 060912

SCHEDULE OF ITEMS

REVISED:

LINE NO 	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1410	827.304 TRENCH ROCK	15.00	 0			
	 	 мз 	~ 	<u> </u>		_
	 SECTION 0001 TOTAL					
	 TOTAL BID					

Items to add or increase

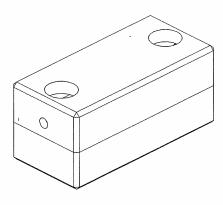
304.104	AGG SUBBASE COURSE - GRAVEL	PLAN QUANTITY	
203.2001	COMMON EXCAVATION	PLAN QUANTITY	
403.211	HOT MIX ASPHALT (SHIMMING)	560	MG
626.11	PRE-CAST CONCRETE JUNCTION BOX	7	EA
626.22	NON-METALLIC CONDUIT	190	М
626.31	450 mm FOUNDATION	4	EA
626.34	SIGNAL POLE FOUNDATION	16	EA
627.77	REMOVING EXISTING PAVEMENT MARKING	9 450	m²
629.05	HAND LABOR	100 H	Hour
631.12	ALL PURPOSE EXCAVATOR	50	Hr
631.172	TRUCK - LARGE	50	Hr
631.22	FRONT END LOADER	25	Hr
631.11	AIR TOOL	20	Hr
631.10	AIR COMPRESSOR	20	Hr
631.14	GRADER	25	Hr
631.15	EARTH ROLLER	25	Hr
631.21	ROAD BROOM	25	Hr
643.86	TRAFFIC SIGNAL LOOP DETECTOR	10	EA
643.91	MAST ARM POLE	4	EA
643.92	PEDESTAL POST	3	EA
643.93	STRAIN POLE	12	EA
645.1201	SIGNAL TRUSS	1	LS
652.31	TYPE 1 BARRICADE	50	EA
652.33	DRUMS	200	EA
652.41	PORTABLE-CHANGEABLE MESSAGE SIGNS	3 4	ΕA
652.34	CONE	100	EA
652.35	CONSTRUCTION SIGNS	80	m ²

South Portland STP-8822(00)X Western Avenue September 13, 2006

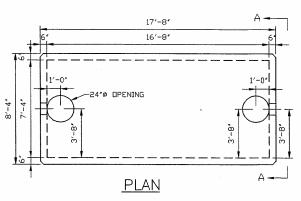


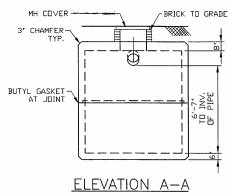
6,000 Gallon Heavy Duty Tank

Model# HT6K



WEIGHT				
Top Section	Bottom Section			
14.43 Tons	12.59 Tons			
Total Weight				
27.02 Tons				





Design Parameters:

Live load: HS20
Earth Cover: As required
Concrete: Design strength fc = 5000 psi
Reinforcing: ASTM A615 (Rebar) Grade 60
ASTM A185 (WWF) fy = 60,000 psi

South Portland STP-8822(00)X Western Avenue September 13, 2006

SECTION 604 ALTERING MANHOLE

This section is amended by the addition of the following:

<u>Description.</u> This work shall consist of altering an existing manhole to a flat top. Existing manhole shall be dismantled sufficiently to allow altering, adjusting or rebuilding in accordance with the applicable requirements as shown on the Standard Detail plans for complete catch basins and manholes. When existing frames, covers and grates are used, they shall be thoroughly cleaned of existing mortar before placing to the new grade.

The existing top assembly shall be removed and replaced with a new flat-top section with the grate set to the required grade using approved clay brick and mortar.

All salvaged material, including grates and frames, will become the property of the Contractor unless otherwise specified.

Each manhole altered shall be cleaned of all accumulated silt, debris, and other foreign matter prior to final acceptance of the work.

Method of Measurement. Altering Manholes will be measured by each unit.

<u>Basis of Payment.</u> Payment shall include all materials, labor, equipment and incidentals required to complete the work of dismantling, cleaning and altering the manhole.

Payment will be made under:

Item Pay Unit

604.171 Altering Manhole EA

SUPPLEMENTAL TRAFFIC SIGNAL NOTES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL COMMUNICATIONS TO THE MASTER DURING CONSTRUCTION. THE COMMUNICATIONS TO THE MASTER SHALL NOT BE BROKEN MORE THAN FOUR TIMES AND SHALL NOT BE BROKEN FOR MORE THAN 24 HOURS PER OCCURRENCE. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF SOUTH PORTLAND'S TRAFFIC SIGNAL MAINTENANCE ENGINEER REGARDING THE TIMES THE COMMUNICATIONS WILL BE DOWN.

THE RELOCATION OF THE CONTROLLERS/CABINETS AND SIGNAL HEADS SHALL BE COMPLETED BETWEEN THE HOURS OF 9:00 PM AND 6:00 AM. AT ALL TIMES WHEN THE TRAFFIC SIGNAL IS NOT OPERATIONAL THE CONTRACTOR SHALL PROVIDE SOUTH PORTLAND POLICE OFFICERS TO DIRECT TRAFFIC. THIS SHALL BE PAID FOR UNDER ITEM 652.381.

ALL NEW MAST ARMS AND POLES SHALL BE HOT DIPPED GALVANIZED UNLESS OTHERWISE SPECIFIED.

ALL NEW SIGNAL SECTIONS SHALL HAVE LED LENSES 0.3048M (1ft) IN DIAMETER WITH 127MM (5in) BACK PLATES.

ALL NEW AND RELOCATED SIGNAL HEADS SHALL BE MOUNTED TO MAST ARMS WITH ASTROBRACKETS.

ALL SPLICES WILL BE MADE IN THE CABINETS MEETING MAINE DOT SPECIFICATIONS.

THE BOTTOM OF THE HOUSING OF NEW SIGNAL FACES SHALL BE AT LEAST 4.8768M (16ft) BUT NOT MORE THAN 5.7912M (19ft) ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.

TWO COPIES OF AS-BUILT PLANS, SIGNAL TIMING AND CONTROLLER MANUALS SHALL BE LEFT IN THE CONTROLLER CABINET.

THE CONTRACTOR IS RESPONSIBLE FOR FINDING EXACT LOCATIONS OF UTILITES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT

DIG-SAFE AND APPROPRIATE AUTHORITIES PRIOR TO ANY SUBSURFACE ACTIVITIES.

TRAFFIC SIGNAL WORK SHALL BE COMPLETED IN A MANNER AND ORDER THAT WILL CAUSE THE MINIMUM DISRUPTION TO TRAFFIC.

THE RESIDENT AND MAINE DOT SHALL HAVE THE RIGHT AND AUTHORITY TO DETERMINE THE ACCEPTABILITY OF WORK AND MATERIALS IN PROGRESS OR COMPLETED AND SHALL HAVE THE RIGHT TO REJECT ANY WORK OR MATERIALS WHICH DO NOT CONFORM, IN ITS SOLE OPINION, TO THE PLANS OR SPECIFICATIONS.

THE FOLLOWING UTILITIES HAVE FACILITIES IN THE GENERAL PROJECT ARE:

CENTRAL MAINE POWER COMPANY

VERIZON COMMUNICATIONS

TIME WARNER CABLE

NORTHERN UTILITIES

GRANITE STATE GAS

CITY OF SOUTH PORTLAND

PORTLAND WATER DISTRICT

MCI

THE CONTRACTOR SHALL MEET ALL REQUIREMENTS OF THE UTILITY COMPANIES WHEN MODIFYING THE EXISTING SERVICE CONNECTIONS AND WHEN INSTALLING EQUIPMENT ON THEIR POLES OR NEAR THEIR WIRES.

THE CONTRACTOR IS RESPONSIBLE FOR THE RELOCATION OF POWER METERS IF REQUIRED AND ASSURING THE POWER METER LOCATION AND INSTALLATION CONFORMS TO THE LOCAL UTILITY REQUIREMENTS. THIS WORK WILL BE INCIDENTAL TO ITEM 643.80.

THE CONTRACTOR SHALL PROVIDE THE RESIDENT, MAINE DOT AND THE CITY OF SOUTH PORTLAND WITH A SCHEDULE OF WORK FOR CONSTRUCTING THE TRAFFIC IMPROVEMENTS.

THE CONTRACTOR SHALL PREPARE A MATERIAL SCHEDULE BASED UPON HIS PLAN REVIEW. ALL SCHEDULES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS OR PERFORMING WORK.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING RED-LINE AS-BUILT DRAWINGS OF THE FINAL WORK TO THE RESIDENT. THOSE DRAWINGS SHALL BE A CLEAN SET OF PLANS SHOWING ALL CHANGES, MODIFICATIONS, AND ELEVATIONS TO THE BID PLANS.

THE CONTRACTOR SHALL PROVIDE MAST ARM DESIGN IN ACCORDANCE WITH SECTION 643.023. MAST ARMS 12.192M (40ft) AND OVER IN LENGTH SHALL BE CATEGORY II. ALL OTHER LENGTHS SHALL BE CATEGORY III.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR FOUNDATION DESIGN AND DOCUMENTATION FOR ALL SIGNAL AND OVERHEAD SIGN SUPPORTS. THE CONTRACTOR SHALL SUBMIT DOCUMENTATION THAT IS STAMPED BY A REGISTERED PROFESSIONAL ENGINEER UNDER THEIR OFFICIAL SEAL TO THE RESIDENT FOR REVIEW AND APPROVAL.

THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF SOUTH PORTLAND'S TRAFFIC SIGNAL ENGINEERING CONSULTANT TO HAVE THEM ADJUST THE COORDINATION OF THE INTERSECTIONS UPON COMPLETION OF THE WORK.

THE RELOCATED EMERGENCY PREEMPTION SYSTEM SHALL BE TESTED TO THE SATISFACTION OF THE RESIDENT AND CITY OF SOUTH PORTLAND PRIOR TO ACCEPTANCE. RELOCATION AND TESTING OF THE PREEMPTION SYSTEM SHALL BE INCIDENTAL TO ITEM 643.80.

VIDEO DETECTION

- 1. VIDEO DETECTION SHALL CONSIST OF TRAFICON MODEL VIP 3.1 AND 3.2 SERIES PROCESSOR BOARDS, TRAFICON MODEL VIEWCOM/E COMMUNICATION BOARD, TRAFICON CAMERA ASSEMBLIES, 228.6MM (9in) B/W MONITOR, SURGE/FUSE PANEL AND TRAFICON KEYPAD ONLY.
- 2. AT LOCATIONS WHERE VIDEO DETECTORS ARE INSTALLED ON TRAFFIC SIGNAL MAST ARMS, AN INITIAL 1.8288M (6ft) VERTICAL

PIPE EXTENSION SHALL BE INSTALLED ON THE MAST ARM WITH THE VIDEO DETECTOR MOUNTED ON THE TOP OF THE EXTENSION PIPE. THE RESIDENT RESERVES THE RIGHT TO DIRECT THE CONTRACTOR TO FIELD ADJUST THE HEIGHT, EITHER LOWER OR HIGHER, OF THE VERTICAL EXTENSION PIPES FOR LOCAL CONDITIONS IDENTIFIED DURING OR AFTER CONSTRUCTION. NO ADDITIONAL COSTS WILL BE ALLOWED FOR FIELD ADJUSTING THE PIPE EXTENSIONS OR REWIRING.

3. THE COST OF POLE RISERS SHALL BE INCIDENTAL TO 643 PAY ITEMS.

INTERCONNECT

- 1. THIS IS PART OF THE MAINE MALL SIGNAL SYSTEM AND WILL REQUIRE THE MODIFICATION AND ADJUSTMENT TO THE EXISTING FIBER OPTIC INTERCONNECT. THE CONTRACTOR WILL BE RESPONSIBLE FOR MATERIALS, LABOR AND EQUIPMENT TO COMPLETE THIS WORK.
- 2. THE CONTRACTOR SHALL CONFIRM LOCATIONS OF EXISTING INTERCONNECT CONNECTIONS AND MAINTAIN THESE CONNECTIONS.
- 3. THE CONTRACTOR SHALL RELOCATE THE EXISTING FIBER OPTIC PATCH PANELS AT EACH INTERSECTION. THEY SHALL BE REINSTALLED IN THE TRAFFIC SIGNAL CONTROLLER CABINETS OR IN ITS OWN CABINET MEETING THE MAINE DOT SPECIFICATION FOR TRAFFIC SIGNAL CONTROLLER CABINETS.
- 4. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE RELOCATION OF THE EXISTING FIBER OPTIC INTERCONNECT CABLE. IF ADDITIONAL FIBER OPTIC CABLE IS REQUIRED, THEN IT SHALL HAVE THE FOLLOWING FEATURES AND CHARACTERISTICS:
 - -LOOSE TUBE OUTSIDE PLANT CABLE FOR CONDUIT OR LASHED AERIAL. IF THE CABLE CANNOT BE LASHED TO EXISTING CABLE, THE CONTRACTOR SHALL USE A SELF-SUPPORTING FIGURE-8 TYPE AERIAL CABLE.
 - -MULTI MODE FIBER.
 - -MINIMUM OF 12 FIBERS.
 - ALL-DIELECTRIC (NON-ARMORED).
 - -DIELECTRIC CENTRAL AND OUTER STRENGTH MEMBERS.
 - -RIPCORD FOR EASY STRIPPING.

- -COLOR-CODED FIBERS AND BUFFER TUBES FOR EASY IDENTIFICATION.
- -RATED FOR OUTDOOR USE.
- -DRY CABLE WITH WATERBLOCKING DESIGN. GEL-FILLED CABLE SHALL NOT BE ALLOWED.
- -STORAGE AND OPERATING TEMPERATURE OF -400 TO +700C (-400 TO +1580F).
- -62.5/125 TYPE MULTIMODE CABLE WITH A 62.5MM CORE, 125MM CLAD AND 245MM COATING.
- -MAXIMUM ATTENUATION OF 3.5DB PER KM FOR 850NM AND 1.0DB PER KM FOR 1300NM.
- -MINIMUM LED BANDWIDTH OF 200MHZ11/32 KM FOR 850NM AND 500MHZ11/32 KM FOR 1300NM.
- -SERIUAL GIGABIT ETHERNET DISTANCE OF 500M FOR 850NM AND 1000M FOR 1300NM.
- -MEETS BELLCORE GR-20 SPECIFICATIONS.
- -FIBERS COMPLY WITH EIA/TIA 492 AND ISO/IEC793 SPECIFICATIONS.
- -SPLICES SHALL BE FUSION SPLICED.
- 5. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS REQUIRED FOR A COMPLETE AND OPERATIONAL FIBER OPTIC INTECONNECT AT THE LOCATIONS SHOWN ON THE PLANS. THE FIBER OPTIC CABLE SHALL BE A 12 CONDUCTOR MULTI MODE FIGURE 8 CABLE. ALL SPLICES SHALL BE WATER TIGHT FUSION SPLICES. IF NECESSARY, THE FIBER OPTIC CABLE SHALL BE ATTACHED TO THE EXISTING UTILITY POLES USING EXTENSIONS BOLTS (DETAILED TO THE RIGHT) WHERE THERE IS EXISTING MUNICIPAL CONDUCTOR ATTACHED TO THE UTILITY POLES. THE CONTRACTOR SHALL RELOCATE ANY MUNICIPAL CONDUIT TO THE EXTENION BOLTS. VIDEO DETECTOR CABLES SHALL BE ATTACHED TO THE FIBER OPTIC INTERCONNECT. THE INTERCONNECT SHALL BE RUN UNDERGROUND USING 2 INCH CONDUIT FROM THE EXISTING UTILITY POLE USED FOR THE TRAFFIC SIGNAL CABINET POWER SUPPLY TO THE TRAFFIC SIGNAL CABINET.
- 6. ALL WORK ASSOCIATED WITH THE INTERCONNECT WIRE SHALL BE INCIDENTAL TO 643 PAY ITEMS.